

We are working on this, and methodological or philosophical suggestions would be welcomed.

RICHARD WAKEFORD

Cambridge University School of Medicine,  
Cambridge CB2 2QQ

### Medical and social factors influencing admission to residential care

SIR,—The study by Dr W J MacLennan and others (3 March, p 701) has a bias which affects the conclusions. The bias is the elderly housebound women identified by their general practitioners. In an Institute for Social Studies in Medical Care study we found that when an elderly widowed person reported that he or she had problems with going out the general practitioner was aware of this in 52% of instances, uncertain in 19%, and thought there was no problem in 29%.<sup>1</sup>

Dr MacLennan and others have therefore compared a group of women recently admitted to residential care with a group of housebound women well known to their general practitioners. The fact that more of those living at home were breathless on dressing and had a history of falls (while those in residential care were more likely to suffer from moderate or severe deafness) may be because they are more likely to consult their doctor about these problems.

Other confusions arise apparently because of inadequate proof reading: it is said that the age of the women in care ranged from 57 to 97, whereas it is presumably 75 to 97, and there is a reference to a preponderance of needs in times of crisis among the group living at home but the figures in table 1 show the opposite.

ANN CARTWRIGHT  
Director

Institute for Social Studies in Medical Care,  
London NW3 2SB

<sup>1</sup> Bowling A, Cartwright A. *Life after a death: a study of the elderly widowed*. London: Tavistock Publications, 1982.

\*.\*Dr MacLennan replies below.—Ed, *BMJ*.

SIR,—In reply to Dr Cartwright, I want to emphasise that we deliberately selected a biased sample. It would have been much easier to use age-sex registers to give unbiased samples but this would almost certainly have given us a sample in which about three quarters of the women were unlikely to need residential care. We focused our attention on very disabled people and therefore looked at a sample known to be housebound.

I agree that there are disadvantages in looking at patients already identified by general practitioners. The only other way, however, would have been to look at around 500 women selected at random, and this was beyond our resources.

I agree our method was biased in favour of severe physical incapacity at home but despite the bias a higher proportion of women in care had severe mental impairment. They also had a higher prevalence of critical needs, presumably because people with dementia are more likely to require services on demand than those with physical incapacity, and again this point was made in our discussion.

A less important issue is the higher prevalence of deafness in people in residential homes, but I fail to see how more women with deafness consulting their general practitioners

could result in a lower prevalence of deafness in this group.

Regarding the ages of women, I agree that this should read 75 to 97, and that we should have stated that a greater preponderance of need came from the group in residential care. I apologise for these two errors.

W J MACLENNAN

Department of Medicine,  
Ninewells Hospital and Medical  
School,  
Dundee DD1 9SY

### Topical minoxidil in the treatment of alopecia areata

SIR,—Like Dr J M Maitland and others (10 March, p 794) and Dr David A Fenton and John D Wilkinson (8 October, p 1015) we started using minoxidil after reading the report of Weiss, West, and Muller.<sup>1</sup> We have now treated 53 patients and in six months have achieved an 80% success rate, which is of the same order as Dr Fenton and Dr Wilkinson. But spontaneous regrowth does occur in this condition, particularly in young patients with the common 5p sized lesion.

One patient with total scalp alopecia was treated, and hair grew at the back of the scalp but nothing except several strange rogue hairs grew on the top or sides. This meant that it was difficult for her to wear her wig, and she had to cut her regrown hair in order to wear it.

Minoxidil does not lower normal blood pressure, and we have treated one man who had multiple small lesions with oral minoxidil (10 mg daily for three months).

In our experience topical minoxidil is safe, convenient, and effective. It should replace other treatments, which include intralesional steroids and inducing contact allergy to dinitrochlorobenzene or primula leaves, as these are no more effective and potentially more hazardous.

We have also used topical minoxidil to treat four cases of female androgenetic alopecia: all showed obvious improvement over four months.

The action of minoxidil deserves more attention. It seems to have a specific effect on hair roots that is unlikely to be due simply to vasodilatation.

COLIN HINDSON  
JON SPIRO  
AILEAN TAYLOR  
EILEAN PRATT

Dermatology Department,  
Royal Infirmary,  
Sunderland SR2 7JE

<sup>1</sup> Weiss VC, West DP, Muller CE. Topical minoxidil in alopecia areata. *J Am Acad Dermatol* 1981;5: 234-6.

SIR,—Dr J M Maitland and others (10 March, p 794) have used a 1% minoxidil lotion in the treatment of alopecia areata and suggested that a higher concentration might enhance the therapeutic effect. We have recently been using a 3% minoxidil lotion<sup>1</sup> and want to describe systemic side effects experienced at this concentration in one of our patients.

A 40 year old normotensive woman with alopecia totalis applied 3% minoxidil lotion to her scalp twice daily. She wore a wig while receiving treatment. While on this regimen she reported intermittent episodes of palpitations associated with central chest pain lasting up to five minutes. She had had no previous history of cardiovascular disease or high blood pressure, and an electro-

cardiograph recorded in an asymptomatic phase was normal. The palpitations ceased when the concentration of minoxidil was reduced to 1%. On further questioning it appeared that the patient may have been applying the lotion too liberally. Also the extensive nature of her alopecia and the occlusive effect of wearing a wig may have contributed to the systemic absorption of the drug.

The manufacturers of minoxidil (Upjohn Ltd) warn that when given systemically the rise in heart rate that follows the use of a potent vasodilator such as minoxidil may induce anginal symptoms in patients with undiagnosed coronary artery disease and recommend that the drug should be given with a  $\beta$  blocker to limit the rise in heart rate.

Patients with alopecia areata are often desperate for a cure and may be overzealous in the application of their treatment. It would seem advisable, therefore, to exercise caution in the use of higher concentrations of minoxidil in patients with extensive alopecia and in those with known coronary artery disease.

VICTORIA M YATES  
CLODAGH M KING  
BRIAN HARROP

Skin Hospital,  
Manchester M3 3HL

<sup>1</sup> King CM, Harrop B, Dave VK. Topical minoxidil in the treatment of alopecia areata. *Br Med J* 1983; 287:1380.

### Dangers of transporting sick children by air

SIR,—Dr Andrew Raffles and Dr Barbara Stewart overemphasise the problems of commercial air travel in children with cyanotic heart disease (28 January, p 322). Drawing on the experience of over one hundred children with cyanotic heart disease travelling by air to various centres for surgery in the past 10 years, I have had no major problem develop during transport or immediately afterwards. Infants with transposition of the great arteries and oxygen pressures as low as 4.3 kPa (28 mm Hg) have been safely transported by parents without oxygen and with no change in appearance or wellbeing.

Sick neonates are sent with trained nurses and medical residents as are other children who are sick. Any child with a deteriorating or borderline clinical problem or a child with recent heart failure requires continuous medical observation and oxygen during flight. Any patient such as their Indian child who was deteriorating at sea level with heart failure and progressive cyanosis should not travel without oxygen and medical attendants, and a little clinical judgment is what is required—not a generalised statement that might unnecessarily restrict air travel or lead to medical attention that is not needed.

Parental supervision only is required for blue babies and children who are stable, and the need for prearranged oxygen depends on clinical diagnoses and the pathophysiology including the possibility of cyanotic spells or changes in pulmonary vascular resistance. Some cyanotic patients may not have their corrective surgery until 5 to 10 years of age, and some never, and many of these children and young adults enjoy airline travel without the need for medical attendants and supplementary oxygen. It is possible to simulate flight conditions and have these children breathe air with 17% oxygen under a hood if there are concerns about elective travel, but in most cases this is not necessary.